Pacific Seabird Group

BULLETIN

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PACIFIC SEABIRD GROUP
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IC SEABIRD GROUP NEWS

NNUAL MEETING

ıe 1987 annual meeting of the Pacific Seabird Group will be held 16-20 December 1987 at ɔmar conference grounds, Pacific Grove, California. All PSG members and others inter- marine birds are invited to share in a full program of scientific, social, and business meet- lowing up on last year's discussions of Marbled Murrelet conservation problems in La Paz, ɔmar meeting will feature a special papers session and workshop on Marbled Murrelet and management. Opportunities for field trips may include a boat trip for marine bird and atching on Monterey Bay, guided excursions to Elkhorn Slough (marsh birds) and Ano tate Reserve (elephant seal colony), or a visit to the Hastings Reservation in the Carmel JC Berkeley). Special arrangements are being made for the group to spend an evening at terey Bay Aquarium. Plan now to attend the 1987 annual meeting.

'TEE ON SEABIRDS AND FISHERIES

e following report by David W. Au (National Marine Fisheries Service, La Jolla, CA) in the "Briefs" of the American Institute of Fishery Research Biologists, February 1987. ıt it here as it should be of interest to seabird biologists as well.

Tuna Relationships

‹e fishermen, fishery scientists can learn much about tuna by studying seabirds. Since ɔlogists of the Pelagic Division, Southwest Fisheries Center, National Marine Fisheries ıave been recording seabird observations in the eastern and central tropical Pacific. This ɛgun on the 1976-1980 dolphin surveys, implicitly recognizes the biological entity of ɹna-dolphin associations.

ıe studies have revealed a large-scale dichotomy in the apex, pelagic community that to involve feeding tactics: multispecies flocks that feed with yellowfin tuna, mainly in waters north of the equator, are apparently sharply separated from virtually single-species at occur largely south of the equator and that feed with skipjack or other small tunas. (*Sula* spp.) are the most abundant of the birds in the multispecies flocks, and, like most ɛcies in the flocks, are facultative commensals with the tuna they follow. Overall, about hese tuna schools were found to be with dolphins, primarily the spotted dolphin (*Stenella* ı) but also to a lesser extent spinner and common dolphins (*S. longirostris* and *Delphinus* Most other cetaceans in the eastern Pacific (some 20 kinds) were found to seldom with either tuna or birds. In the single-species flocks to the south, the sooty tern (*Sterna* essentially an obligate commensal on tuna, predominates. Those flocks, and associated ɛ seldom with dolphins. This dichotomy in community organization is a conspicuous l feature of the eastern tropical Pacific, and indicates the existence of different, large-scale egimes.

ıe implication from these species relationships is that ecologically successful species of productive, tropical seas will be those species capable of following or feeding with tunas-- / their annual fishery yields are evidently very successful in that habitat. Boobies, espe- ɛ red-footed and masked species (*S. sula* and *dactylatra*) are the most abundant of birds in waters north of the equator, and are characteristic of flocks that feed with yellowfin tuna. :ted dolphin is the most abundant cetacean in the eastern Pacific, and it too is closely d with yellowfin. Sooty terns are the most abundant bird species south of the equator ı in the central Pacific), and have a strong, commensal feeding relationship with skipjack small tunas there.

Differences in availability of tunas appear related to differences in productivity, and how tunas accordingly feed, as indicated by bird behavior. South of the equator, food is not apparently in large patches; the tuna there are fast moving, and their feeding bouts are brief. Only sooty terns seem to be very successful in following these tuna. In contrast, tuna on the purse seine grounds north of the equator feed on relatively long-lasting aggregations of surface prey, in association with several other, similarly feeding species of seabirds and dolphins. And where both "schoolfish" and longline tuna fishing are important (and "porpoise fishing" is not), as in some areas west of Panama and Costa Rica, the bird-tuna association is very variable, suggesting that the tuna there feed variously between surface and subsurface layers (presumably, birds do not build up flocks over schools not feeding long at the surface). Finally, the summer immigration of southern hemisphere Juan Fernandez and white-necked petrels (*Pterodroma externa* susspp.) onto the extensive yellowfin fishing grounds west of Clipperton Island indicates a reliable seasonal increase of production--and of surface-feeding tuna over which these birds flock. This is also indicated by the seasonal increase of fishing effort and catches there. The feeding of these petrels with tuna was not expected, as they are of a family of birds that are typically surface gleaners.

Future research will include analyses of areal changes in flock species diversity, in the degree to which flocks associate with tunas (as an indicator of tuna behavior and availability), studies of seasonal movements of flocks and flock behavior, and of the relationship of flock size to tuna-school tonnage.

David W. Au
Southwest Fisheries Center
U.S. National Marine Fisheries Service
La Jolla, California

Alec MacCall

EXCHANGE JOURNALS

The Pacific Seabird Group has entered a cooperative agreement exchanging publications with other organizations, primarily other seabird groups. This will allow us to bring the membership pertinent news from other parts of the world. In addition, the editor has joined the remaining seabird groups with whom we do not have this cooperative agreement. The groups with whom we have an exchange relationship are:

The Charles Darwin Research Station
The Colorado Ornithological Society
The Dutch Seabird Group
The Endangered Species UPDATE
Inselstation der Vogelwarte Helgoland
IPT Asian Wetland Bureau
Medmarvis
The Royal Naval Birdwatching Society
The Royal Society for the Protection of Birds
The Scandinavian Seabird Group
Seabird Watch (Sri Lanka)
Sherkin Island Marine Station (Ireland)

In addition, the editor is a member of the following seabird groups:

The African Seabird Group
The Australasian Seabird Group
The Seabird Group

The new French Seabird group has no publication as yet. However, we are in contact with the French group.

L REPORTS

JOEL HUBBARD

arch effort devoted to Alaskan seabirds and coastal species continues at a level similar recent years. The U.S. Fish and Wildlife Service (primarily the Alaska Fish and Wildlife Center and the Alaska Maritime National Wildlife Refuge) is involved in most of these cluding several which will facilitate assessment of potential effects from coastal and evelopment.

idies

t Hatch (USFWS, Anchorage) has initiated a kittiwake-banding program on Middleton letermine post-fledging survivorship; studies to examine the energetic basis of breeding this species also are underway. Gerry Sanger (USFWS, Anchorage) is continuing his on of puffin food habits in the western Gulf of Alaska and eastern Aleutians; seasonal nestling diet will be documented in the Semidi Islands. Dee Boersma (Univ. Wash., analyzing Fork-tailed Storm Petrel food samples, growth, and mate fidelity data collected ren Islands. Mike Nishimoto and Dave Nysewander (USFWS, Homer) will monitor storm oductive success and population status of puffins and gulls in the Barren Islands. They nonitor several species in Kachemak Bay and at Chisik and Duck Islands. Dave Irons Anchorage) will monitor kittiwake numbers and reproductive success in Prince William d will examine methods to improve monitoring protocol for this species.

rge Hunt, Elizabeth Flint, Pete Prince, and Margaret Rubega (Univ. Calif., Irvine) will he cost of raising kittiwake and murre chicks at large and small colonies in the Pribilof nd how this relates to reproductive success and prey abundance. Vern Byrd (USFWS, lso will be on the Pribilofs, monitoring population change and reproductive success of ormorants, kittiwakes, and murres. John Piatt, Scott Hatch, and Chris Haney (USFWS, e), in a study for Minerals Management Service, will be monitoring numbers, productivity, habits of kittiwake, auklet, and murre populations on St. Lawrence Island. Offshore ill be used to determine the interrelation of foraging areas, prey distribution, and phic features; the latter also will be determined from satellite data.

Murphy and Jay Schauer (Univ. Alaska, Fairbanks) will continue the long-term monitor- tiwakes and murres at Bluff, with emphasis on the relation of nesting synchrony, atten- terns, and predation with reproductive success. Art Sowls (USFWS, Homer) and Dave (FALCO, Fairbanks) will monitor kittiwakes and murres at Chamisso and Puffin Island, ate habitat change. They also will examine murre numbers at Cape Thompson to deter- ne population is still declining. Art and Alan Springer (FALCO, Fairbanks) will examine and murre numbers and productivity at Cape Lisburne. In addition, they will monitor of blasts during Air Force quarrying operations. George Divoky (NOAA, Univ. Alaska) itor the banded black guillemot population on Cooper Island for the 13th year; good rge.

nd Pelagic Studies

k Derkson, Dave Ward, Cal Lensink, and Bob Stehn (USFWS, Anchorage), in a study nded by the Minerals Management Service, are investigating the effect of aircraft over- n behavior and habitat use of black brant at Izembek NWR. The effect on migration

energetics also will be examined. Declan Troy (LGL Alaska, Anchorage) has completed three cruises for NOAA in the Unimak Pass ares, during which he identified seasonal marine bird concentration areas. Onshore work will establish plots in the Krenitzin Islands and develop census techniques for nocturnal species. Chris Haney (USFWS, Anchorage) is developing techniques for characterizing marine bird habitats using satellite imagery, to be correlated with existing information on bird distribution and abundance. He also will be monitoring fall migration of Ross' Gull near Pt. Barrow, using satellite data to characterize foraging areas. Dave Nysewander (USFWS) will be transferring Aleutian Canada geese from Buldir Island to Amchitka Island as part of a repopulation project. Among numerous studies of coastal waterfowl are included: waterbird surveys in coastal habitats of the Yukon Delta and Alaska Peninsula by John Sarvis and Chris Dau (USFWS, Cold Bay) and Rod King (USFWS, Fairbanks); coastal waterfowl surveys in northwestern Alaska by Terry Doyle, Mike Spindler, and Jerry Stroebele (USFWS, Kotzebue); counts of common eider nests on Beaufort Sea barrier islands by Cathryn Moitoret (USFWS, Fairbanks); monitoring of goose and swan distribution and abundance in the Prudhoe Bay area for ARCO by Steve Murphy and Betty Anderson (ABR, Fairbanks); coastal waterfowl surveys in southeast Alaska by Bruce Conant and John Hodges (USFWS, Juneau).

Reports

Scott Hatch and Vern Byrd (USFWS) are collaborating on a seabird monitoring techniques manual which will present standardized methods. George Hunt, Nancy Harrison, Zoe Eppley, and others (Univ. Calif.) are writing up the results of a northern Bering Sea study relating oceanographic features to distribution of plankton and foraging auklets. A synthesis of all physical and biological information available on the Gulf of Alaska, including a chapter on marine birds by Tony DeGange and Gerry Sanger (USFWS, Anchorage) is being published by NOAA and MMS; it should be out this summer. A draft final report (NOAA;OCSEAP), Environmental Characterization of the North Aleutian Shelf Nearshore Zone, containing the results of aerial surveys for marine birds is in revision. Tony DeGange is finishing a manuscript on seabird mortality in Japanese gill nets. Gerry Sanger has finished a draft of Trophic Interactions Between Commercial Fisheries and Seabirds in Alaskan Waters. Margaret Petersen (USFWS, Anchorage) is writing up results of her studies of breeding geese on the Yukon Delta. Doug Schamel and Diane Tracy (Univ. Alaska, Fairbanks) are publishing a paper on breeding red phalaropes. Bob Day (Univ. Alaska, Fairbanks) and Vern Byrd are working on a manuscript concerning feeding ecology of whiskered auklets. Vivian Mendenhall (USFWS) is completing a Marine Bird Management Plan which will guide many aspects of Fish and Wildlife research; it will be available in early 1988. A draft Alasks Maritime National Wildlife Refuge Comprehensive Conservation Plan should be available for comment in the fall of 1987.

News

The Fish and Wildlife Service will christen their new 120-foot research vessel ("Eagle") in Homer on 2 July. It should greatly exapnd pelagic research capabilities and support of remote field camps.

INLAND REGIONAL REPORT, PAUL C. JAMES

Please note that my new address is: Saskatchewan Museum of Natural History, Wascana Park, Regina, S4P 3V7, Canada. I have heard from only a few people regarding research and survey activities in the Inland Region. Please take the time to drop a short note to me at the above address.

University of Saskatchewan

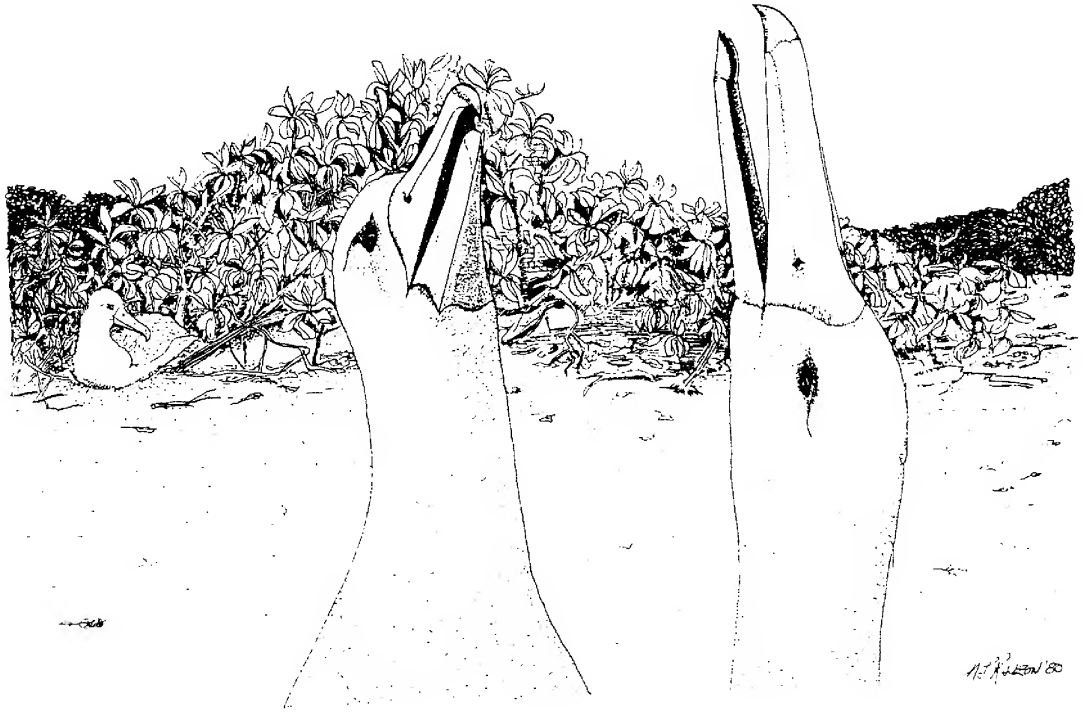
Barbara Hanbidge is currently writing up her master's thesis on the feeding ecology of Double-crested Cormorants at Dore Lake, Saskatchewan. As with the majority of these studies, she has found that the birds are not taking fish of any significant economic value.

Saskatchewan Museum of Natural History/Wildlife Branch

The results of the 1985 census of American White Pelicans and Double-crested Cormorants in Saskatchewan conducted by Keith Roney and Marv Hlady were recently published (Blue Jay 44: 177-179). The numbers of breeding pelicans and cormorants have increased by 16% and 51% respectively since the last census in 1982. It is likely that the pelican will be de-listed from "threatened" to "rare" by the Committee on the Status of Endangered Wildlife in Canada.

Canadian Wildlife Service

Although a few sites in the three Canadian prairie provinces have been receiving survey coverage in past years through the Maritime/International Shorebird Surveys Program, 1987 saw the initiation of the Prairie Shorebird Surveys Program being coordinated by Loney Dickson of C.W.S., Edmonton. The air/ground surveys will enable identification of key shorebird sites in the area and allow for their future inclusion in the international "Sister Reserves" program. While the results from this spring are not yet available, it is already clear that several of the prairie lakes are extremely important, each supporting 20,000+ shorebirds on the count day.



REGIONAL REPORT

NORTHERN CALIFORNIA/OREGON, ROY W. LOWE

Oregon State University

Dr. Eric P. Hoberg of the College of Veterinary Medicine is continuing his research with seabird endoparasites from areas outside this region. The primary emphasis of his research is host-parasite coevolution, and evolution, historical ecology, and biogeography of helminths among marine birds in Alaska and Antarctica. At present, he is concentrating his work with cestods in the Alcidae, Phalacrocoracidae, and some procellariiforms.

University of Oregon

Dr. Janet Hodder, of the Oregon Institute of Marine Biology, and Michael R. Graybill, manager of the South Slough Estuarine Sanctuary, are continuing their various seabird studies in Coos County, Oregon. Their projects include (1) studying the breeding biology of Pigeon Guillemots nesting among the timbers of the abandoned Sitka Dock in Coos Bay; (2) studying the nesting success of Pelagic Cormorants at the OIMB Colony in Sunset Bay which has been monitored for 15 consecutive years; (3) continued monitoring of nesting success of Western Gulls at the Cape Arago Lighthouse Colony; and (4) monitoring the nesting activities of Western Gulls, Pelagic Cormorants, and Tufted Puffins at Elephant Rock and Table Rock near Bandon, Oregon.

University of California, Berkeley

Douglas A. Bell is initiating a study to determine the mechanisms and extent of hybridization between Western and Glaucous-winged Gulls. Major objectives of the study are to (1) ascertain the extent of inter- and intraspecific variation in the two species, (2) observe behavior in nesting colonies with pure and mixed species-pairs, and (3) determine the distribution and mating success of pure and hybrid birds in the zone of hybridization. This study will be conducted in California, Oregon, and Washington.

Lewis & Clark College

Dr. Donald S. McKenzie is studying the breeding biology, population dynamics, and activity time budgets of Western Gulls at Yaquina Head, Yaquina Bay, and the Agate Beach Landfill near Newport, Oregon. Birds are being color-marked with oil base paint pellets (red-orange-blue-green-yellow) fired from a CO gas-operated color-marking pistol. Some birds may also be trapped and banded.

U.S. Forest Service

The Redwood Science Laboratory, under the guidance of Peter Paton and C. John Ralph, conducted systematic bird censuses at Redwood Experimental Forest (USDA), 15 miles south of Crescent City, California. Censusing was done during the summer of 1984 and monthly during 1985 through May 1986. Marbled Murrelets were detected using the study area from April-August and October-November. Birds were censused on three redwood stands of various ages ranging from young to old-growth. Plans are to continue monthly censuses of these stands year-round, contingent upon project funding levels. Information gathered will be used to quantify monthly murrelet use patterns of these inland stands and determine murrelet detectability patterns in relationship to sunrise.

U.S. Fish and Wildlife Service

Roy W. Lowe of the Western Oregon Refuge Complex is continuing program development efforts associated with the newly established Coastal Biologist position stationed at the Hatfield Marine Science Center in Newport, Oregon. The following activities are scheduled for this year. (1) document nesting chronology and reproductive efforts and success for various seabird species, (2) Update seabird colony census data along the Oregon coast and begin planning for a coastwide census of all Oregon colonies in FY-88, (3) conduct nearshore and offshore census transects for all species with some work directed at determining distribution and abundance of Marbled Murrelets in Oregon, (4) continue beach mortality transects, (5) initiate an annual aerial census of Brown Pelicans for the Oregon coast and Columbia River Estuary during the peak use period in September, and (6) continue observations of Aleutian Canada Goose use of offshore islands during migration and monitor the wintering population in Tillamook County.

In June 1986, biologists with San Francisco Bay and Humboldt Bay National Wildlife Refuges conducted aerial photographic censuses of all northern California Common Murre colonies north of Cape Mendocino. While these colonies steadily increased through the 1970's, the recent censuses indicate that they have remained relatively stable since 1982. This information has been very useful in comparing trends in Murre populations in central California where gill net entanglement has reduced local Murre populations. All northern California colonies will be surveyed in 1987, and the photographs will be archived.

Others

Dan Matthews recently testified at a State Senate Subcommittee hearing on four bills concerning plastics in the environment and presented data about plastic contamination in Sooty Shearwaters and Common Murres off Oregon. He will be collecting additional specimens this summer to monitor plastic ingestion in these species.

Robert L. Pitman is continuing his long-term study of the reproductive biology of Leach's Storm-Petrels on Saddle Rock, Oregon Islands National Wildlife Refuge. To date, a total of 2,548 birds have been banded with about half of the total consisting of HY birds. A total of 26 on site recaptures have occurred. Information is also being collected on food habitats.

Daniel H. Varoujean and Wendy Ann Williams are again working under contract to the Oregon Department of Fish & Wildlife, Non-game Program studying Marbled Murrelets along the central portion of the Oregon coast. They are capturing murrelets at sea with a modified net gun and placing radio transmitters on birds suspected of breeding in an attempt to locate nesting sites.

Range Bayer is continuing his long-term beach mortality transects north of Newport, Oregon.

Bob Loeffel is continuing his long-term beach mortality transects south of Newport, Oregon. He is now in the 10th year of data collection, making his study the longest running one of this kind in Oregon.

Kathy Liska has initiated a beach mortality transect study near Seal Rock, Oregon.

PACIFIC REGION, DAN MORIARTY

Main Hawaiian Islands

Composition of nest materials utilized by Red-footed Boobies at Kilauea Point, Kauai. D. Moriarty, R. Bottomley, USFWS, Kauai; A. Bills.

Current status of Wedge-tailed Shearwater colonies on Kauai. The study will follow up on the 1978 status by Byrd et al., D. Moriarty, R. Bottomley, USFWS, Kauai; A. Bills.

Survey and inventory of seabirds, State of Hawaii. Survey selected seabird populations and their habitats to determine population trends and identify limiting factors: Townsend's Shearwater, Laysan Albatross, Dark-rumped Petrel, Band-rumped Petrel, and others. T. Telfer, DLNR, Kauai.

Townsend's (Newell's) Shearwater Recovery Program. A joint State of Hawaii DLNR, U.S. Fish and Wildlife Service project to recover Townsend's Shearwater fledglings attracted to lights along Kauai's coastline. Aid stations and a public informational campaign which mobilizes hundreds of citizens to assist in picking up and salvaging thousands of downed birds each season. T. Telfer, DLNR Kauai; D. Moriarty, USFWS Kauai.

Water loss of eggs from tropical seabirds. Studies involve red-footed boobies at Ulupau Crater, Oahu, wedge-tailed shearwaters at Manana Islands, Oahu; and Bulwer's petrels on Manana Island. G. Causey Whittow, John A. Burns, School of Medicine, Univ. of Hawaii, Honolulu.

Albatrosses were sighted in February at Kaneohe Marine Corps Air Station for the first time during this current nesting season. Five birds were marked with pink bands and released at Makapuu Pt. Hazing continues at Dillingham Airfield where 19 more birds were color-banded on January 19. Albatrosses continue to arrive at the airfield; however, the number of marked birds resighted has been very low. Between February 22 and March 26, stray dogs killed 21 albatrosses on and around the airfield. Despite this loss, occurrences of up to 31 birds at a time are still being reported at the airfield. Tim Ohashi, Animan Damage Control APHIS-USDA.

Development of thermoregulation in embryos and chicks of the Sooty Tern, Brown Noddy, and Wedge-tailed Shearwater: on Manana, an offshore island of Oahu. William R. Dawson, University of Michigan; Peter M. Mathiu, Ron E. Dunn, and G. Causey Whittow, Dept. of Physiology; and John A. Burns, School of Medicine, University of Hawaii.

Northwestern Hawaiian Islands

Black Noddy, Red-footed Booby Food Study. Food samples were taken every two weeks for a two-year period from the Tern Island colonies. Lab analysis has recently been completed. M. Seki, NMFS, Honolulu; C. Harrison.

Throughout 1986 and 1987, seabird populations throughout French Frigate Shoals were surveyed for breeding populations and phenology. Also, on Tern Island, monitoring studies of egg size, reproductive success, and chick growth were conducted for black noddies, red-footed boobies, and red-tailed tropicbirds. In 1987, black-footed and Laysan albatross reproductive success will be determined as well. Data to be compared to long-term baseline. Collection of seabird regurgitate was made to determine incidence of plastic ingestion in Hawaiian seabirds as part of plastic

ingestion study reported here. R. Vetter, J. Suther, L. Martin, D. Hu, D. K. McDermond, and S. Fefer, USFWS, Honolulu.

Refuge biologists surveyed seven islands and atolls in the Northwestern Hawaiian Islands (NWHI) in 1986. During brief stops, we censused selected seabird species and noted reproductive chronology of all species present. We also assisted Tim Gerrodette, National Marine Fisheries Service monk seal biologist, in tagging weaned pups and reading green sea turtle tags. We noted no signs of rodent introduction or unauthorized landing on the most remote NWHI, which are visited once a year or once every other year. The surveys will be conducted during May and June 1987. R. Vetter, J. Suther, L. Martin, D. Hu, D. K. McDermond, and S. Fefer, USFWS, Honolulu.

In 1986, population and phenology surveys were conducted. 1987 surveys are planned. Reproductive success, egg size, and chick growth studies were conducted involving red-footed and masked boobies and brown noddies, in 1986. Data to be compared to previous years for indication of changes in these parameters which may have occurred. In 1987, chick growth studies will be continued. Collections were made of seabird regurgitate as part of plastic ingestion study listed separately here. D. K. McDermond, E. Bean, D. Hu, and S. Fefer, USFWS, Honolulu.

Prevalence of plastic in the digestive tract of 10 species of Hawaiian seabirds, representing three orders (Procellariiformes, Pelecaniformes, and Charadriiformes) was examined from April through August 1986. In 1987, additional species will be sampled and geographic variation in plastic ingestion of several species will be examined throughout the Hawaiian Islands. Birds were sampled by stomach pumping or necropsy techniques on Kauai, Tern, Laysan, and Midway Islands. In 1985, plastic was present in seven species and located in the ventriculus, proventriculus, or intestines. Survival rates were calculated for Laysan albatross chicks artificially fed plastic (0, 100, or 200 cc) and chicks naturally fed plastic by adults during 1986. Plastic quantities in naturally fed chicks were determined by endoscope examination of the proventriculus. Chicks ingesting high volumes of plastic had low survival rates. Further study is necessary to determine whether this is a causal relationship. Growth and reproductive system studies of Laysan albatross throughout the period will be conducted in 1982. Paul Sievert, Louis Sileo, National Wildlife Health Lab., Madison, Wisconsin; and Stewart Fefer, USFWS, Honolulu.

Other Islands

GUAM

Monitoring predation of Guam's avian fauna by the introduced brown tree snake (*Boiga irregularis*). Roosting and breeding populations of White terns, Brown Boobies, White-tailed Tropicbirds, Brown Noddy Terns are affected by this very efficient predator. Populations on offshore islets appear stable. At present, there is no control of the brown tree snake, and no control measures are planned. Robert E. Beck, Jr., Aquatic and Wildlife Resource, Dept. of Agriculture, P. O. Box 2950, Agana, Guam.

1986 Seabird observations on Ulithi Atoll (Micronesia). Incidental to fruit bat and forest bird surveys, seabird observations were collected throughout the fieldwork including data on Red Footed Booby, Black Noddy, and Brown Noddy colonies. John Engbring, USFWS, Honolulu.

1986 Seabird observation in American Samoa. On Tutila Island in American Samoa, we found a Tahiti Petrel in a burrow and a colony of Audubon's Shearwaters; both constitute new records for this island. On Ta'u Island in American Samoa, we sighted unusual petrels overland,

possibly Herald or Kermadec Petrels. Either species would represent a new record for the island. John Engbring, USFWS, Honolulu.

Report from John Warham, Zoology Dept., Univ. of Canterbury, Christchurch, New Zealand. His research activities include: (1) preparation of the biology of petrels, 2 vols., Academic Press, (2) preparation of a bibliography of the Procellariiformes, and (3) preparation of the *Handbook of Australian Seabirds* with Angus and Robertson.

JOHNSON AND CHRISTMAS ISLAND

Monitoring success growth rates and population from the 1982-83 El Nino on Christmas Island. Monitoring effects of a minor 1986-87 El Nino, affecting both survival and growth rate on Johnson Atoll. Ralph and Elizabeth A. Schreiber.

Monitoring populations of seabirds on Johnson Atoll National Wildlife Refuge. Douglas Foresll.

HONG KONG

Up to 60 Saunder's Gulls winter in Deep Bay, Hong Kong. This is the largest known wintering flock of this species. The breeding area is still unknown, although these gulls may breed inland. David Melville, World Wildlife Fund, Hong Kong.

SOUTHEAST, RON NAVEEN

Dave Anderson (University of Pennsylvania) has been involved in a study of the breeding success of Masked and Blue-footed Boobies on Isla Espanola, Galapagos Islands, Ecuador. In conjunction with this, he is completing a Ph.D. dealing with aspects of sibling aggression and brood reduction in these two species. He and Robert Ricklefs are conducting a radio-tracking study of the boobies and other seabirds in the Galapagos.

Thomas Custer (USFWS) hopes to initiate a study of the accumulation of contaminants (organochlorines, metals, PAH's, etc.) in immature Black-crowned Night-herons and Great Egrets in two colonies along the Texas Gulf Coast. He is also involved in a study of the effects of organochlorines (mainly DDE) on reproductive success in White-faced Ibis in south Texas.

Malcolm Coulter (University of Georgia) is involved in two studies: (1) Breeding and Foraging Ecology of Wood Storks in east-central Georgia and (2) Breeding phenology of Blue-footed Boobies on North Seymour Island, Galapagos.

Michael Erwin (USFWS) is working with a graduate student on a project involving radio-tagging nesting Black Skimmers to monitor foraging habitat use. He is beginning a study of the ways in which high marsh ponds, created for mosquito control, are used by waterbirds and shorebirds throughout the year. He is finishing a project assessing the habitat features associated with colony locations along the east coast and species associations.

Sheila Mahoney (Florida Atlantic University) is involved in various studies: (1) osmoregulation in African flamingos, (2) breeding ecology of Sooty Terns in the Dry Tortugas (with Terry Plantier), (3) thermoregulatory behavior of anhingas, (4) thermoregulation of albatross chicks, (5) blood characteristics of breeding seabirds at Midway Island, and (6) water turnover in frigatebirds.

WASHINGTON REPORT, DAPHNE GEMMILL

The 100th Congress is pursuing an environmental agenda. One of its first acts was to pass the Clean Water Act, which President Reagan had vetoed at the end of the previous session. While budget issues always command attention during the first half of the year, the biggest natural resource issue in this session is the future of the Arctic National Wildlife Refuge along Alaska's north coast. However, several other topics of interest to those concerned about seabirds, shorebirds, and waders will be debated during this session. Heading the list are plastics and driftnets in the marine environment, endangered species, marine paints, coastal zone protection, offshore oil leasing, foreign assistance, and international treaties.

FY '88 BUDGET

In keeping with the past six years, the Reagan administration proposed budget cuts for wildlife and marine resource programs. A summary of current budget proposals for two key agencies follows.

U.S. Fish and Wildlife Service

The administration is seeking $318 million for the Service in FY '88, nearly 20% less than the $396 million appropriated for FY '87. The largest cuts are in the areas of land acquisition and refuge operation and maintenance. Wildlife enforcement and endangered species programs also would be cut. Grants to states that set up their own endangered species programs would be terminated. Once again, the House rejected the administration's budget and approved $401 million, $5 million more than the FY '87 appropriation.

National Oceanographic and Atmospheric Administration

The administration is seeking to cut ocean, coastal, and fisheries programs and to terminate funding for state grants under the Coastal Zone Management Act--as well as funding for colleges and universities to develop ocean research and educational activities under the Sea Grant program. Some of the programs that would be cut include estuarine, habitat, and antarctic research and gear entanglement studies. Congressional staff predict that an increase over the agency's 1987 budget is most likely.

ARCTIC NATIONAL WILDLIFE REFUGE

The Alaska National Interest Conservation Lands Act of 1980 mandated the Department of Interior to report to Congress on the oil and gas potential and the wilderness and wildlife values of the arctic refuges' coastal plain. The refuge, referred to as the North American Serengeti, is important in the life cycle of many arctic wildlife species, including shorebirds and geese. Any development in the refuge must be approved by Congress.

The report, released on April 20th, concludes that the oil reserves can be explored and developed without causing significant harm to wildlife or the fragile arctic environment. The oil industry hailed the report. Environmentalists condemned it, saying the nation does not need the small and short-term gains in oil supplies at this time. They argue the nation should focus first on reducing long-term oil demand, increasing efforts to conserve energy and developing alternative renewable sources of power before sacrificing irreplaceable arctic habitat.

To lease or not to lease may become the most important development versus conservation issue of the decade. The complexity of the issues and intensity of feelings make it unlikely the matter can be settled during this session of Congress.

ENDANGERED SPECIES

The Endangered Species Act, originally passed in 1973, officially expired in 1985. This law requires federal agencies to make certain that their activities do not jeopardize any endangered species or destroy its critical habitat. In addition, the U.S. Fish and Wildlife Service and the National Marine Fisheries Service must list species as endangered or threatened and to prepare detailed recovery plans.

Though Congress has not been able to agree on a new bill, it has continued to authorize and appropriate funds at approximately the 1985 level of $39.25 million. Virtually identical bills have been introduced in the House and Senate. These bills would extend the Act for five years and authorize increased funding from $56 million in FY '88 to $66 million in FY '92. Last year, some western Senators concerned about the Act's effect on western water development, predator control, and various development interests stalled the bill. They may push again for special interest amendments.

However, the issue that may prevent reauthorization of the Act this year may be TEDs or turtle excluder devices. The use of TEDs on shrimp boats drastically reduces the number of sea turtles caught and drowned in shrimp nets. TEDs are mandatory this summer. Supporters of the Endangered Species Act are reluctant to bring up their bill because they are afraid the anti-TED forces will use it as an opportunity to attach an amendment that would propose to eliminate the mandatory use of TEDs.

PLASTICS AND DRIFTNETS IN THE MARINE ENVIRONMENT

To date, seven bills have been introduced in the House and Senate dealing with plastics and/or driftnets in the marine environment. HR 940, one of the more comprehensive bills, has been the subject of several hearings. This bill's key features are:

- imposing a $25,000 fine for any person who dumps or discards plastic materials in ocean waters within 200 miles of the U.S. coast,
- barring the disposal of other forms of unprocessed garbage within 12 miles of the coast,
- directing the Secretary of State to negotiate with certain foreign countries to reduce the number of seabirds, marine mammals, and fish accidentally killed through entanglement with driftnets off the Pacific coast,
- establishing a sanctuary around the Aleutian Islands where driftnet fishing would be prohibited, and
- authorizing $3 million annually for two years to allow the Commerce Department to study the environmental effects of present driftnet fishing operations, the need for a net-marking system to track abandoned nets, the feasibility of biodegradable plastics, and the overall plastics pollution problem.

MARINE PAINT

An antibarnacle agent in marine paints, tributyltin (TBT), has been shown to be extremely toxic to shellfish and other aquatic life. Virginia has become the first state to ban the use of TBT. Virginia's two Senators, along with Maine's Senator, have introduced S. 428, Tributyltin-Based Antifouling Paint Control Act, which bans the use of all but the least toxic TBT-based marine paints until the Federal Environmental Protection Agency decides whether nationwide restrictions are needed.

COASTAL ZONE PROTECTION

"How well do our federal laws protect our coasts?" is a question being discussed on Capitol Hill. Of the federal laws that affect ocean and coastal activities, three are generally considered to have the biggest impact. The 1972 Coastal Zone Management Act is designed to encourage and assist coastal states to voluntarily develop and implement coastal management plans meeting certain minimum federal standards. The 1982 Coastal Barrier Resources Act eliminates federal insurance and subsidies for development on certain barrier islands, thus removing incentives for developing wetlands and other vital habitats in these areas. The 1968 National Flood Insurance Act provides low-cost insurance to communities that institute floodplain management plans. The issues under review relate to coastal development, management, and conservation as well as coastal and estuary pollution. Some of the specific topics are:

- o enlargint the coastal barrier resources system to include the coastal barriers of the U.S. Virgin Islands, Puerto Rico, Florida Keys, New Jersey, and Maryland but not the Pacific or the Great Lakes,

- o requiring federally approved or permitted development activities to be consistent with federally approved state coastal management plans,

- o designating Cordell Bank and Monterey Bay, California, as National Marine Sanctuaries,

- o developing effective programs for preventing coastal water pollution, especially from industrial and municipal wastewater treatment plants,

- o protecting and restoring coastal wetlands, and

- o expanding the National Estuary Program conducted by the U.S. Environmental Protection Agency to include San Francisco Bay, CA, and Albemarle/Pamlico Sound, NC, in addition to Buzzards Bay, MA; Long Island Sound, NY; Narragansett Bay, RI; and Puget Sound, WA.

OFFSHORE OIL LEASING

The U.S. Department of Interior has put into effect a new five-year leasing plan for oil and gas exploration on the Outer Continental Shelf. Congress responded with language in the Interior Department's appropriation bill imposing a moratorium on oil and gas leasing in the George's Bank fisheries area off Massachusetts as well as certain tracts off Florida's Cape Canaveral. Congressional opponents are discussing options for protecting environmentally sensitive areas in Alaska and California as well.

FOREIGN ASSISTANCE

In addition to the usual authorization of funding for the United Nations Environment Program, foreign aid authorization for FY '88 includes environmental provisions in a number of areas:

- o funding for biological diversity protection,
- o a provision that the Secretary of Treasury is to pursue improvements in the environmental performance of development banks, such as the World Bank. For example, the Secretary is to instruct U.S. directors of the banks to vote against loans having "significant, avoidable adverse impacts" and to seek to increase lending for environmentally beneficial projects (e.g., preservation of sensitive wetlands and other ecosystems).

In early May, the World Bank announced new measures to elevate environmental protection among the bank's priorities. Not only will the Bank create a new environment department and hire additional staff but will also participate in several environmental projects--for example, a cooperative effort for the protection of the Mediterranean Sea's environment.

INTERNATIONAL TREATIES

The Senate is considering ratifying Annex V of the 1973 International Convention for the Prevention of Pollution from Ships, known as MARPOL. Annex V, now ratified by 25 nations, outlaws the dumping of plastics at sea.

* * * * * * *

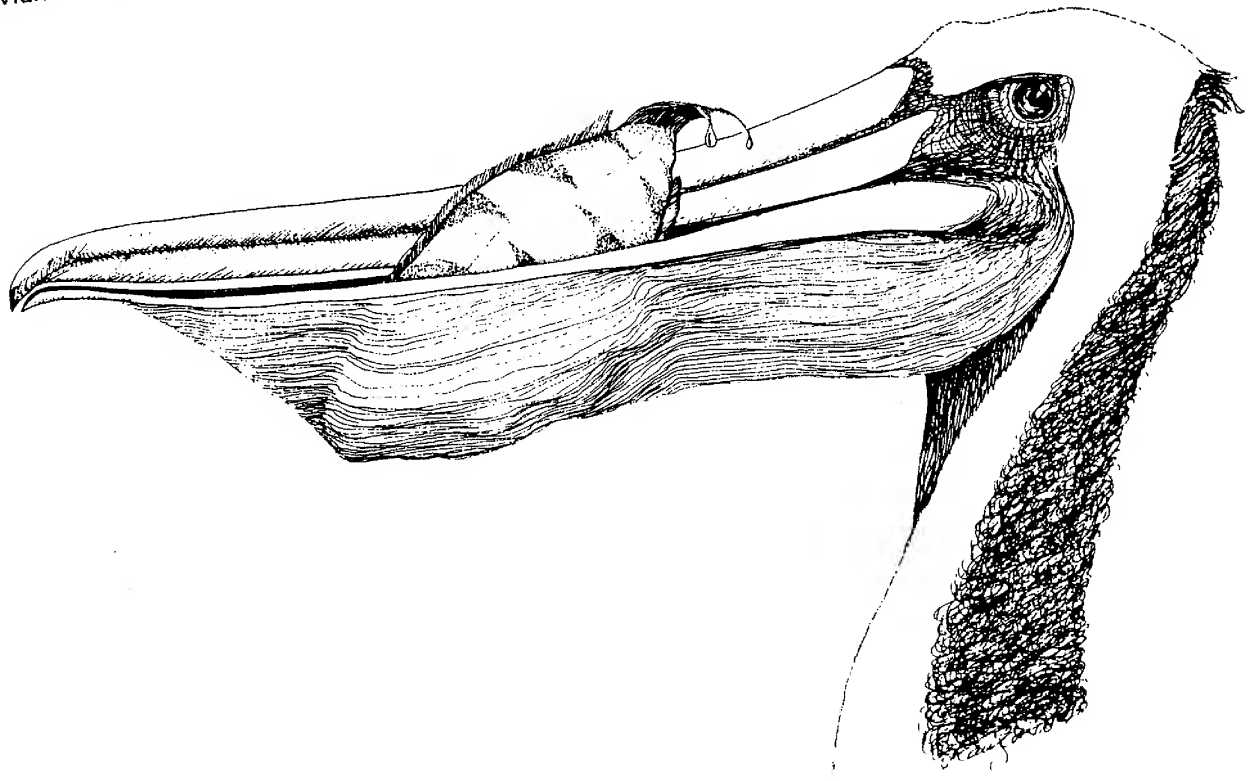
The last session of Congress disposed of many issues that had been lingering for several years, leaving the 100th Congress to begin legislative debate on many new topics. The legislative process is slow and tortuous. Therefore, many of the environmental issues affecting seabirds, shorebirds, and waders are unlikely to be enacted this session. The fact that hearings are being held to discuss such critical issues as plastics in the marine environment is, however, a hopeful sign that in the not too distant future seabirds, shorebirds, waders, and other marine creatures may have additional protection.

BILLS BEFORE CONGRESS

Several bills (S 62, HR 537, HR 940) are currently before Congress on incidental mortality of seabirds in driftnets in the North Pacific. Bills S 62 and HR 537 were submitted in similar form last year. Salmon nets on the high seas are routinely set and allowed to drift overnight and are then hauled in each morning. Besides salmon, the nets catch seabirds and porpoises. Impacts on most species are probably not severe, but breeding puffins are caught in large numbers and colonies in the western Aleutians may be at risk, according to a draft report by Tony DeGange. Another problem is that a small percentage of nets are not retrieved and continue to kill fish and birds. The bills would prohibit driftnet fishing within 60 miles of the Aleutian Islands, encourage more reliable retrieval of nets, and increase research into seabird mortality. PSG passed a resolution at the 1986 meeting supporting the driftnet bills.

A variety of bills are also before Congress addressing the issue of plastic debris at sea. Junk and small particles of various sizes are eaten by foraging seabirds, either incidentally for food items or when mistaken for these. Most of these bills would constitute enabling legislation for Annex V of the Convention on Prevention of Pollution Sea; when ratified by the Senate, this treaty would prohibit disposal of any plastic trash at sea by U.S. ships or in U.S. waters. Some bills would also initiate research into impacts of plastic trash or marine life research on means to reduce trash or hasten its decomposition and start public education on the hazard of marine trash. Bills include: S 534, S 535, S 559, S 560, S 633, and HR 940; there may be others.

Vivian Mendenhal



U.S. FISH AND WILDLIFE SERVICE NON-GAME PROGRAMS

The Pacific Seabird Group has been concerned that the U.S. Fish and Wildlife was decreasing its commitment to seabird research and seabird conservation (see PSG Bulletin 14, 1:50). Lora Leschner began a survey to determine the ammount of commitment that the U.S. Fish and Wildlife Service has made for seabirds. Lora has received two responses to her letters:

Dear Ms. Leschner:

December 31, 1986

This responds to your letter, dated November 18, 1986, concerning involvement of the Fish and Wildlife Service in Pacific seabird research and management.

The Service has not changed its priorities regarding seabirds. We continue to be active in developing conservation, management, and research programs for these birds. What has changed is how we allocate resources to these activities. More attention is focused on management and monitoring than in the past. Also, more effort is concentrated in Washington, Oregon, California, and Hawaii than in earlier years. We do not expect these activities to change significantly in FY 1988 and 1989.

I have enclosed a table that summarizes our current activities involving seabird management, monitoring, and research. If you should have additional questions, do not hesitate to call upon us.

Sincerely,

FRANK DUNKLE
Director, U.S. Fish and Wildlife Service

FY 1987 Activities of FWS Involving Pacific Seabird Management, Monitoring, and Research

Region	Total Funded	Total Manpower	Activities	Location
1	$340K	6.5 FTE	Monitoring population distribution and abundance; investigating food habits and distributions, collecting life-history data.	Mainland
			Monitoring reproduction, food sources, breeding and growth, investigating effects of plastic ingestion and contaminants.	Hawaii and Johnston Atoll
7	$460K	7.5 FTE	Investigating diets, breeding, contaminant impacts, and predation by foxes; monitoring population status on 12 islands; and developing population and contaminant monitoring techniques and management plans.	Alaska Maritime NWR, coastal islands

8	$240K	4.0 FTE	• Investigating food habits and reproduction	St. George Island, AK
			• Investigating seasonal distribution and abundance, population dynamics and ecology, and seabird/fishery interactions.	Alaska
			• Investigating effects of ingestion of plastics on seabirds.	National Wildlife Health Center, Madison, WI

Dear Ms. Leschner:

December 29, 1986

Thank you for your inquiry concerning seabird research and management activities in the U.S. Fish and Wildlife Service. The Service recognizes the importance of Alaskan seabirds as a major component of the north Pacific ecosystem and as an international wildlife resource. We are committed to management and conservation of Alaskan seabirds, as mandated by law.

The Alaskan region (Region 7) of the Service maintains a number of monitoring programs and carries out studies to improve management of seabirds. We are providing some details on these projects and on personnel and funding below. Other more intensive investigations of seabird ecology and management in Alaska are carried out by the Alaska Office of Fish and Wildlife Research. This group, although located in the same building as the Region 7 directorate, is administered under Region 8, the nationwide research arm of the Service. Region 8 is responding separately to your inquiry on behalf of the Alaska Office of Fish and Wildlife Research.

The Alaska Maritime National Wildlife Refuge comprises most islands along the state's 30,000-mile shoreline and the Aleutian chain. The refuge was formed in 1980 under the Alaska National Interest Lands Conservation Act. Biologists in this refuge monitor seabird populations and productivity in approximately eight sites from Cape Lisburne to southeastern Alaska. Additional sites are expected to be covered in 1987 or shortly thereafter, especially in the Aleutians. Logistical support is also provided for monitoring of two other sites on the refuge by private researchers. In addition, two studies to improve management of seabirds are underway: determination of diets of the declining populations of kittiwakes in the Pribilofs, under contract to the University of Alaska, and removal of foxes on Kiska Island to permit recolonization by seabirds. The Alaska Maritime Refuge had 3 full-time biologists assigned to seabird work in 1986, and another who is employed during the summer; the refuge budget for seabird work was $370,000. In fiscal year 1987 (which started in October 1986) there will be 5 full-time biologists due to the transfer of two people from the regional office to the refuge, as well as the intermittently employed biologist and several summer technicians. The 1987 budget for refuge seabird work is expected to be about $450,000. These figures do not include administrative and overhead costs that support the program.

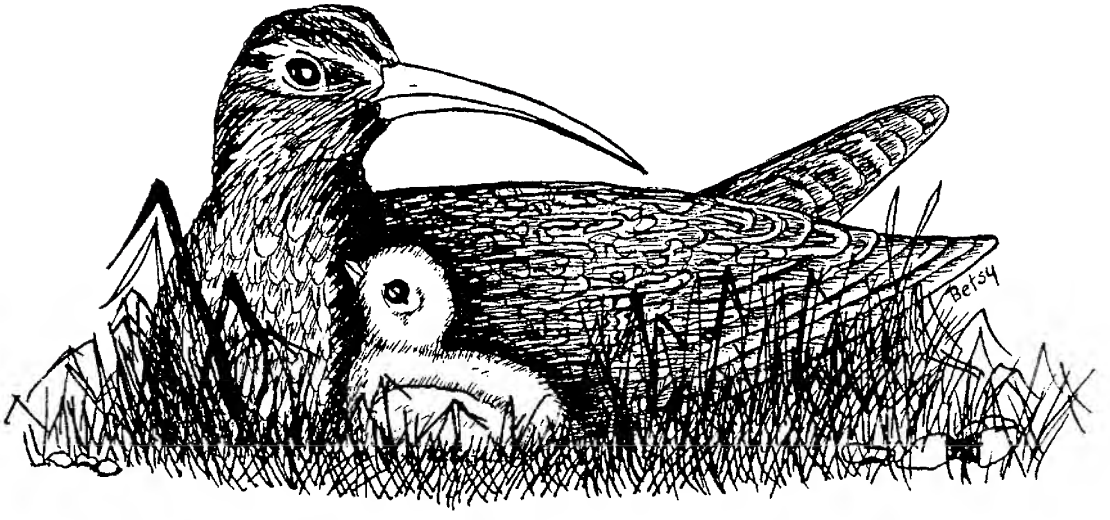
The Division of Wildlife Assistance in 1986 carried out monitoring in Prince William Sound and other sites in central Alaska, and maintained the Seabird Colony Catalogue. The group had four full-time employees and a budget of $210,000. In fiscal year 1987 the group was disbanded due to a Service-wide reorganization, but all biologists were reassigned to other divisions. The Alaska Office of Investigations will continue the monitoring work in Prince William Sound, and will initiate a study of possible contaminant effects on marine birds of the Valdez oil terminal. One biologist will be responsible for these projects; final budget estimates are not available yet.

In October 1986 the Service established a new unit in the Alaskan regional office, the Branch of Coastal and Marine Resources. This group will provide overall planning and coordination of Service work on coastal ecosystems, including seabirds. It will also provide technical consultation to other units of the Service and to private researchers, and will identify new management issues of concern to the agency. One biologist serves as Marine Bird Coordinator within the branch, with a budget of $55,000. Among other things, this person is responsible for the maintenance and expansion of the Seabird Colony Catalogue.

I hope this answers your concerns. Please contact me again if you wish further information about our seabird programs in Alaska. We are dedicated to the conservation of Alaskan seabirds, and as the above figures show, we are maintaining our staff and funding at or above last year's levels. We look forward to expanding our work in the future in areas of particular concern.

Sincerely,

Don M. Nelson
Assistant Deputy Regional Director
U.S. Fish and Wildlife Service



CONSERVATION NEWS

Marbled Murrelet

Following the Marbled Murrelet Workshop at the 1986 PSG meeting, Lora Leschner sent letters expressing our concern that this species should be considered in management plans for old-growth forests:

March 11, 1987

Ted C. Stubblefield
Forest Supervisor
Olympic National Forest
P. O. Box 2288
Olympia, Washington 98507

Dear Mr. Stubblefield:

The Pacific Seabird Group (PSG) is a scientific organization composed of seabird researchers and conservationists dedicated to the study and conservation of Pacific seabirds and their environment. The PSG was formed in 1972 and now has over 600 members from 16 countries. An information pamphlet on the activities and scope of the PSG is enclosed.

The status of the Marbled Murrelet in Washington, Oregon, and California are of great concern to PSG. We urge you to consider this species as Sensitive and to include designation of its breeding habitat in your Forest Plan. We believe that the old-growth habitat for this species can be included in the Management Areas for other species, but the habitat must be within 75 km of saltwater.

Seabird researchers met at the PSG annual meeting in December 1986 to discuss research and management of this species. Biologists from Alaska, British Columbia, Washington, Oregon, and California who have conducted research or inventories of this species reviewed the published literature and the unpublished reports and observations. The conclusion of this working group is that the Marbled Murrelet should be classified as a Sensitive Species and that protection of remaining nesting habitat is necessary. Little is known about nesting Marbled Murrelets, but its dependence on old-growth coniferous forest has been demonstrated in research and inventories from British Columbia south. An interim management plan should be implemented until there is unequivocal information on its habitat requirements.

The resolutions drafted by PSG, a summary of threats to Marbled Murrelet populations, management recommendations, research priorities, and a list of workshop participants are included with this letter.

Please include the Marbled Murrelet in your Forest Plan.

Sincerely,

THE PACIFIC SEABIRD GROUP

Lora L. Leschner
Executive Council

cc: Brock Adams, Daniel Evans, Don Bonker, Al Swift

Dear Ms. Leschner:

March 26, 1987

Thank you for sending me a copy of your letter to Ted C. Stubblefield, the Forest Supervisor of the Olympic National Forest.

I appreciate the information you have sent o my office regarding the Marbled Murrelet in Washington, Oregon and California. I welcome all suggestions, concerns and sources of information. This will help me work towards ensuring a bright future for our children and grandchildren in years to come.

Thank you again for your thoughts. Please feel free to contact me in the future at any time.

Sincerely,

BROCK ADAMS
United States Senator

Dear Ms. Leschner:

April 20, 1987

I received your comments regarding the Olympic National Forest Management Plan. I am pleased to note the growing public awareness in this area of natural resource management.

Because of the importance of National Forests in our state, I have been following the forest planning process with great interest. There are many, and often conflicting, interests in our national forests because of the importance of the forest for watersheds, wildlife habitat, recreation activities, the timber industries, aesthetics, and as an essential component of the Washington environment. Our forests are one of our state's greatest assets, both as a natural resource and an economic resource.

By law, forest land that is not withdrawn for a particular purpose, such as wilderness, must be managed for multiple-use purposes. When faced with a choice between competing and conflicting uses, management decisions must carefully draw a balance between individual concerns. For instance, our old growth forests offer various consumptive uses as well as scenic and environmental uses. Similar trade-offs are faced with the proposed designation of a wild, scenic or recreation river. Assessment of the anadromous fish habitat and recreation potential must be made in conjunction with potential hydropower development, timber harvesting and effects on private landowners. I would not support short-sighted planning that would result in undue environmental degradation, nor would I support a plan that does not recognize the important place that timber and other natural resource industries have in the economic welfare of our state.

I appreciate knowing your concerns about nesting Marbled Murrelets and their dependence on old growth timber on the Olympic National Forest. We must also take a close look at the cumulative effects all the forest plans will have on environmental and economical issues once all the draft plans have been issued. Your thoughtful contribution to this important process is appreciated.

Sincerely,

DANIEL J. EVANS
United States Senator

Conservation Issues - California

The Pacific Seabird Group has felt that the California Brown Pelican population has recovered sufficiently in recent years that the U.S. Fish and Wildlife Service should consider down-listing that population from endangered to threatened. In March 1986, Lora Leschner wrote to the Office of Endangered Species presenting our views. To date, she has received no reply to her letter.

Conservation Issues - Hawaii

Local community group is seeking federal funding to protect seabird colonies adjacent to the existing Kilauea Point National Wildlife Refuge. Acquisition of an additional 138 acres will protect the only accessible seabird colony in the Hawaiian Islands. G. Smith and J. Yoshimoto, Crater Hill Coalition, P. O. Box 419, Ilaauea, Kauai 96754.

Conservation Issues - Oregon

A. The potentially lucrative commercial harvesting of red urchins has spread from California into Oregon very rapidly. A processing facility was recently established in Port Orford to process the urchin gonads which are eaten as a form of sushi. This is an export market with 100% of the product going to Japan. Approximately 1 million pounds of urchins were harvested from waters near Fort Bragg, California, in November 1986! If harvesting is done properly, it may simulate conditions that existed prior to the extirpation of the Sea Otter when kelp beds were more numerous and extensive. The concern voiced by the U.S. Fish and Wildlife Service in Oregon is the amount of boat activity that will be occurring immediately adjacent to seabird nesting colonies. In Oregon, almost all rocks, reefs, and islands are included within the National Wildlife Refuge System; however, the boundary is mean high tide, and boat traffic cannot be restricted around or among the rocks. Personnel with the Western Oregon Refuges Complex are working with the Oregon Department of Fish and Wildlife and directly with fishermen in an attempt to monitor the harvesting and prevent disturbance to nesting seabirds.

B. An experimental Thresher Shark fishery that began in Oregon in 1986 has been expanded this year. The majority of the boats taking part in this fishery that requires Oregon Experimental Fishing Gear Permits are from California. Some of the restrictions that apply to the fishery include the use of only one (1) gillnet not more than 1,000 fathoms in length, mesh size not less than 16 inches (measured between knots), and web thread material not finer than regular seine thread #24. Not more than 1,000 fm of finished net plus 250 fm of repair webbing may be aboard the vessel and fishing during daylight hours and within five (5) miles of shore is not permitted. This year's catch quota has been increased to 820,000 lbs with the major portion of the harvest expected to occur off the Columbia River plume. Another stipulation of the fishing permit is that each vessel must allow an observer on board if so requested by the Oregon Department of Fish and Wildlife. Last year, only one or two at-sea observations of this fishery were made to collect data on the sharks and document mortality to nontarget species. Seabird entanglement in this gear should be very low to nonexistent although some impacts on marine mammals can be expected. One Harbor Seal is known to have died in a net last year. Monitoring by ODF&W and USFWS personnel will be attempted this year.

Conservation Issues - Washington

Federal legislation in 1986 transferred Quillayute Needles and Flattery Rocks National Wildlife Refuge from the U.S. Fish and Wildlife Service to the National Parks Service (see PSG Bulletin 14, 1:54). The PSG worried about the seabirds breeding on these islands, and Lora Leschner wrote to U.S. Senator Evans expressing our feelings. She recently received a letter to Frank Dunkle from Senator Evans and Congressman Swift dealing with these islands:

March 17, 1987

Mr. Frank H. Dunkle
Director, United States Fish and Wildlife Service
Department of the Interior
18th and C Streets, Northwest
Washington, D.C. 20240

Dear Mr. Dunkle:

Since the passage of the 1986 Olympic National Park and Olympic National Forest Boundary Adjustment Act, questions have arisen about the legislative intent of the management of the offshore islands in the Quillayute Needles and Flattery Rocks National Wildlife Refuges, which were included in the boundary of the Olympic National Park.

We would like to say at the outset, that it was not the intention of Congress to undermine the good work of the Fish and Wildlife Service in the management of those islands as wilderness areas and critical shorebird nesting habitat. Rather, the intent was to involve the National Park Service to enhance the management of those islands and to provide for greater protection of the resources on the islands.

The Fish and Wildlife Service has a major role to play in the continuing management of those islands, and we think that wilderness wildlife management should continue to be the priority management objective for these islands. By including these islands within the boundaries of the Park, the National Park Service can draw upon its resources to strengthen the protection of those islands. As an immediate resolution of this issue we would encourage the Fish and Wildlife Service and the National Park Service to negotiate a joint management agreement.

Sincerely,

DANIEL J. EVANS
United States Senator

AL SWIFT
Member of Congress

Chrsitmas Island, Indian Ocean

The Phosphate Mining Corporation of Christmas Island (PMCCI) proposed the clearing of the western terrace of South Point on Christmas Island for mining. The company requested permission to do this clearing from the Australian government. Lora Leschner wrote to the Australian authorities expressing the PSG concern that this would eliminate important breeding areas for seabirds. Recently the PMCCI has withdrawn its request to the Australian government.

SEABIRD GROUPS

Malcolm Coulter, editor of the Bulletin, has been in touch with most seabird groups in other countries. The PSG Bulletin has an exchange agreement with most of these other groups. News reported in the other bulletins that is relevant to the Pacific Seabird Group is summarized in the Bulletin. Mark Tasker provided many of the addresses of the European Seabird Groups. Below are the addresses for contacting these other seabird groups:

- African Seabird Group
  Publication: The Cormorant

  Mr. John Cooper
  editor, The Cormorant
  Percy FitzPatrick Insitute of African Ornithology
  University of Cape Town
  Rondebosch 7700
  South Africa

- Australasian Seabird Group
  Publication: Australasian Seabird Group Bulletin

  Dr. D. J. Robertson
  editor, Australasian Seabird Group Bulletin
  New Zealand Wildlife Service
  Department of Internal Affairs
  Private Bag
  Wellington
  New Zealand

- Colonial Waterbird Society
  Publication: Colonial Waterbirds

  Dr. William K. Southern
  Department of Biological Sciences
  Northern Illinois University
  DeKalb, Illinois 60115
  U.S.A.

- Dutch Seabird Group
  Publication: Sula

  Secretary
  Club van Zeetrekwaarnemers
  Melis Stokelaan 201
  1813 DG Alkmaar
  Netherlands

- Groupement d'Interet Scientifique Oiseau Marins
  (French Seabird Group)
  Publication: none

  Dr. Georges Hemery, Chairman
  c/o M.N.H.N.
  55 Rue Buffon
  75005 Paris
  France

- Grupo de biologia e ecologia de aves marinhas no Brasil (Brazilian Seabird Group)
  Publication: Atoba

  Martin Sander
  Editor, Atoba
  Museo de Zoologia da UNISINOS
  Caixa Postal: 275
  93020 -- Sao Leopoldo
  RS Brasil

- Inselstation der Vogelwarte Helgoland
  Publication: Seevogel

  Dr. Gottfried Vauk
  Verein Jordsand zum Schutz
  der Sevogel und der Natur
  Postf. 1220
  D - 2192 Helgoland
  West Germany

- IPT Asian Wetland Bureau
  (formerly Interwader)
  Publication: Asian Wetland News
  IPT-ASIAN WETLAND BUREAU
  Institute of Advanced Studies
  University of Malaya, Lembah Pantal
  59000 Kuala Lumpur, Malaysia

- Medmarvis
  (Mediterranean Marine Bird Association)
  Publication: News from Medmarvis

  Secretariat
  Medmarvis
  c/o Taraxacum Clut
  20, rue St. Martin
  75004 Paris
  France

- Pacific Seabird Group
  Publication: Pacific Seabird Group Bulletin

  Dr. Kenneth T. Briggs
  Chairman
  Coastal Marine Laboratory
  Univ. California
  Santa Cruz, CA 95064
  U.S.A.

- Royal Naval Birdwatching society
  Publication: The Sea Swallow

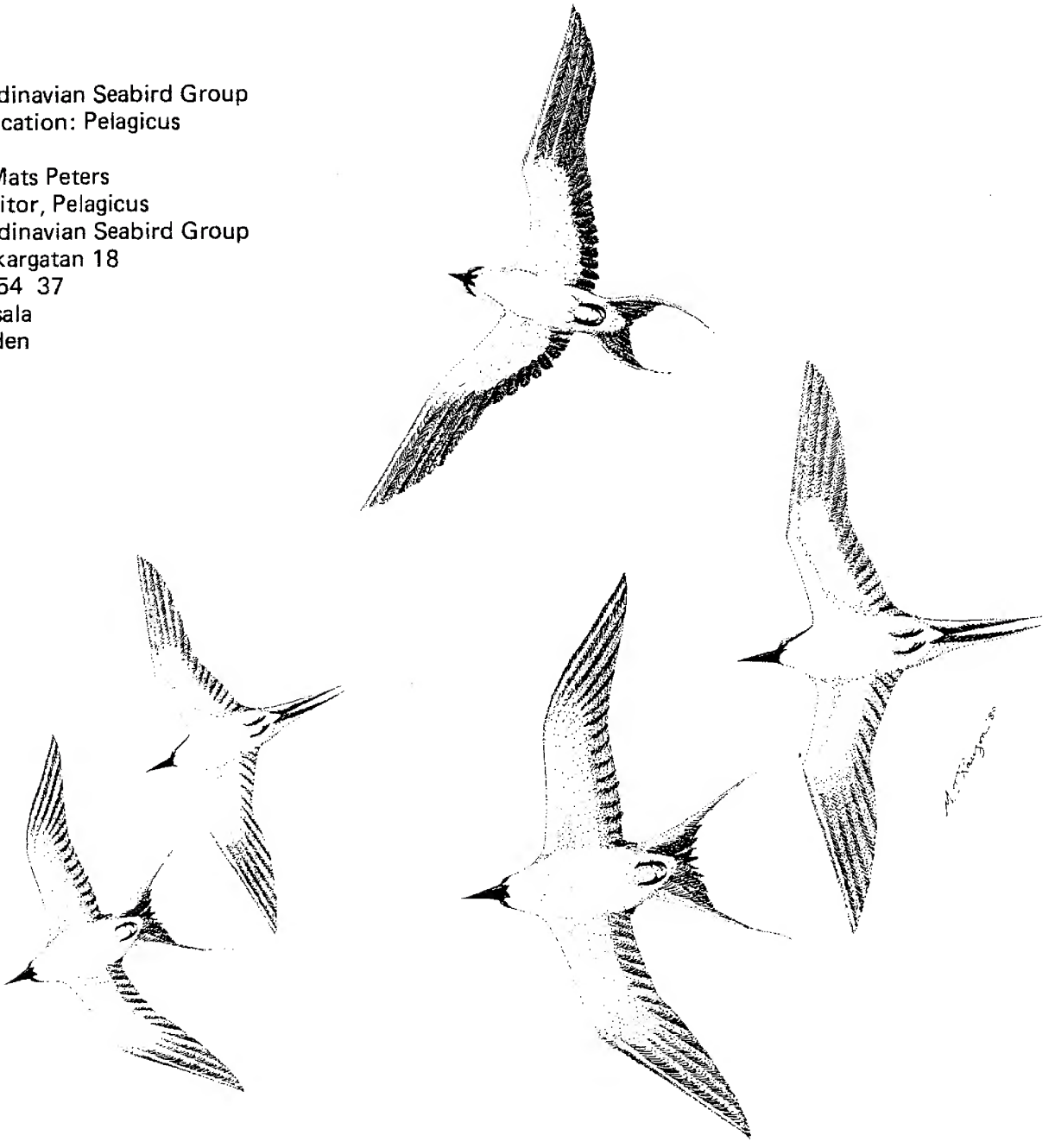
  Col. P. J. S. Smith R. M.
  Hon. Secretary and Treasurer
  Royal Naval Birdwatching Society
  5, Burrows Close
  Great Bookham
  Surrey KT23 3HB
  England

- Seabird Watch (Sri Lanka)
  Publication: Seabird Watch Bulletin

  Dr. Rex I. De Silva
  Project Coordinator
  Seabird Watch
  Hepporawatte
  Dampe
  Mada patha
  (Piliyandala)
  Sri Lanka

- Scandinavian Seabird Group
  Publication: Pelagicus

  Dr. Mats Peters
  editor, Pelagicus
  Scandinavian Seabird Group
  Snickargatan 18
  S - 754 37
  Uppsala
  Sweden



GALAPAGOS BOOBIES DURING THE 1987 ENSO

Seabirds in the Galapagos Islands responded dramatically to the unusual oceanographic conditions of the 1982-83 ENSO (El Nino Southern Oscillation) event, in most cases abandoning breeding efforts and deserting nesting areas. Responses during the 1987 event were generally less extreme. My assistants and I worked in the Galapagos from late January to early April 1987, concentrating on long-term studies of feeding and breeding activities of sulids but also noting breeding activity of other seabirds. During this period, sea surface temperatures reached their highest level of the current event. We collected first-hand data from the islands Espanola, San Cristobal, Genovesa, and Daphne, and second-hand data from other islands.

Blue-footed booby (*Sula nebouxii*) breeding failed throughout the archipelago in January and February, and adults deserted some colonies completely. The large colonies at Cabo Douglas (Isla Fernandina) and Punta Vicente Roca (Isla Isabela), in the western part of the archipelago, were deserted by adults, and mass mortality of chicks occurred at Cabo Douglas and Daphne. In contrast, unusually large numbers of adults roosted at Punta Cevallos on Espanola, in the southeast corner of the group. Breeding at that site had apparently ceased abruptly late in 1986; I found hundreds of volant dependent young but less than 15 nestlings.

Masked boobies (*S. dactylatra*) were not so dramatically affected. The number of breeding attempts at Punta Cevallos was similar to those of the three previous years, but the laying peak had evidently occurred approximately one month earlier than in 1984, 1985, and 1986. Thousands of young near fledging were present during our visit in February. In sharp contrast, birds on Genovesa, 160 km to the north of Espanola, were highly synchronized at the egg stage or courtship in late March, with less than 2% of breeding attempts involving nestlings.

Red-footed boobies (*S. sula*) at the large Genovesa colony were also highly synchronized at the egg stage in late March, but local concentrations of nests with nestlings indicated that successful breeding during the preceding several months was not impossible. The red-foots at Punta Pitt (San Cristobal), 120 km SSE of Genovesa, were unsynchronized. This population showed no sign of ENSO effects; and courting pairs, eggs, nestlings, and fledglings were all present.

Observations of activities of other seabirds confirm the general picture of a complex response to the ENSO conditions. Only 15 of the 200,000 wedge-rumped storm petrels (*Oceanodroma tethys*) typically present at the Genovesa colony were observed on the afternoon of 1 April, although *Oceanodroma* storm petrels were abundant at sea in the eastern part of the archipelago. Great frigatebirds (*Fregata minor*) on the same island initiated courtship in March as is usual, and dependent young of the previous year showed no obvious detrimental effects of the warm water. Clearly the recent ENSO event had an impact on the breeding of many of the resident seabird species, but the differences between species and between neighboring islands provide a sharp contrast with the generally catastrophic failure in 1982-83. The complex, but generally mild, effect of the 1987 ENSO on seabird breeding may be more typical of such events than was that of the unusually severe 1982-83 event.

David J. Anderson
Department of Biology
University of Pennsylvania
Philadelphia, Pennsylvania 19104

NEW PUBLICATIONS

Status and Conservation of the World's Seabirds. Croxall, J. P., P. G. H. Evans, and R. W. Schreiber, eds. International Council for Bird Preservation, 219c Huntingdon Road, Cambridge CB3 0DL, England or Smithsonian Institution Press, Washington, D.C. 20560. 779 pp. Paperbound. $24.90 plus $2.00 postage and packing.

The unequivocal, eminently useful scope of this work is nothing short of stupefying. It transcends the usual limits imposed by a book of this size and specialization, and the result is an impeccably comprehensive overview of the breeding range and abundance of 282 species of the world's seabirds. Additionally, the present and potential threats to these species are characterized with suggestions on how these might be overcome or mitigated. Pertinent to each species treatment is discussion on the limits imposed by insufficient knowledge, which brings to it an added, and, to my mind, indispensable dimension of sound perspective.

This is the second and longest in a series of International Council of Bird Preservation Technical Publications. It incorporates 47 papers by 80 different authors. Its scope extends from Greenland to Antarctica and follows the equator around the globe from Costa Rica, Ecuador, and the Hawaiian Islands to the Bahama Islands, the Caribbean, and the adjacent tropical western Atlantic waters. This publication is, in fact, a profoundly learned, richly detailed primer of worldwide seabird distribution and conservation.

The focus of the book is the birds of the world's oceans and islands scattered across the oceans at various latitudes. The basic problem with such a projected focus is one of sheer size. Basic geographic knowledge is still incomplete, even with the aid of satellite photos. Mapping of the ocean floor is even further from completion with only a negligible percentage charted in topographic detail. Basic discoveries await ornithologists in the biological sciences and will continue to appear to the delight of specialists. Recent decades have seen an information explosion in the field of ornithology, and even some of the most remote islands and seacoasts are now accessible to the adventurous field biologist. In the open ocean, suitable habitats for breeding pelagic bird species are few and far between. However, the unifying theme of this work seems to stress that the relationships of seabirds to their environment is not fixed and immutable. A change in one species affects an entire community and communities, in turn, influence the gradual reshaping of the environment. Nowhere is this interdependence more apparent than in oceanic birds and their breeding and foraging areas.

In many of the papers, the message is that the total wildernesses of the past no longer go unmarred by human progress and modernization and their accompanying ills. Preserving or restoring the delicate equilibrium on so many of the earth's unique islands is clearly a priority for a majority of the authors.

Although there is a great wealth of birdlife to wonder at today in the area encompassed by this volume, there have been too many subtle destructions. There are but a few places that are still pristine. Introduced mice, rats, dogs, cats, pigs, goats, horses, donkeys, and cows were brought to seabird islands; with them, many seabird populations were drastically reduced, some less conspicuously than others. Many tenuous island subspecies were or are being eradicated. The special perspective of active seabird conservationists is everywhere apparent in this book, as are the unrelenting challenges facing them.

Throughout the 47 papers, there are genetic messages, optimum breeding and feeding strategies, fundamental but disparate ornithological phenomena, coherently framed investigations, ambiguous biological motifs, consistently plausible and complex field techniques, and--above all--tough and vigorous research.

Summarily, this is meat and drink for the student of seabird biology; a bureau of standards against which future such thematic technical publications should be made to measure.

Susan Roney Drennan

The Ecological Implications of Body Size. R. H. Peters. 1983. Cambridge University Press, New York. xii + 329 pp.

It should not be surprising to find that this book, which deals with the ecological implications of body size, is strongly oriented towards an energetic/physiological approach to the subject. Surface/volume allometry is a natural focus of such an approach and summaries of weight-specific allometric regression equations form the "meat" of the rather extensive appendices of data summarized from over 500 cited literature references, 61 of which, according to their titles, deal specifically with birds. It is indeed these 63 pages of tabular appendices which may, in the long run, prove to be the most valuable part of this book for ornithologists. Intercepts, slopes, and in many cases, r^2 values and error estimates are provided for regressions of bird body weights against such variables as metabolic rate, organ weights, clutch size, egg and hatchling mass, incubation time, wingbeat frequency, and others.

The book's index is thorough and appears to have been carefully prepared, but it cannot be used to locate either specific species or other avian taxonomic groups.

After some initial philosophical statements which reflect a generally pessimistic view of the current state of most modern ecological theory, which is described as "scientifically weak and practically futile," the body of the text begins with a useful mathematical primer and then quickly moves to the "balanced growth equation" as a means of applying the first law of thermodynamics to living organisms. From this, there follows major chapter-length treatments of metabolism, physiology, temperature, locomotion, ingestion, production, mass flow, and animal abundance. A later "catchall" chapter provides less extensive coverage of behavior and evolution. Considering the depth of coverage given to locomotion, the more limited treatment given to general animal behavior is surprising.

Except for those who research interests deal specifically with metabolism, growth, energetics, and/or physiology, few ornithologists would probably find sufficient need to warrant purchasing this book for their own personal libraries. However, the wealth of material which has been digested and tabulated in the appendices alone makes this book a valuable reference source to be aware of if this kind of information should ever be needed.

I. Lehr Brisbin, Jr.
Savannah River Ecology Laboratory

William L. Finley: Pioneer Wildlife Photographer. W. Mathewson. 1986. Oregon State University Press, Corvallis. 208 pp.

William L. Finley was a wildlife photographer, popular nature writer, wildlife manager, and conservationist in the early part of this century. His career as a photographer began when field photography required the use of heavy view cameras and glass plates and ended after the movie camera had become practical. Finley is remembered as a master and pioneer of both techniques, and some of his still photographs are considered to be classics. He wrote popular nature articles throughout his career and was a vigorous champion of conservation causes. His photographs and writings are said to have persuaded Teddy Roosevelt to establish Three Arch Rocks, Klamath, and Malheur national wildlife refuges.

This account of Finley's life and work is partly a disappointment and partly a treasure. The text is brief (only about 22 double pages) and only hints at the complexity of Finley's character and relationships with others. Finley's main claim as a photographic artist comes from the still photographs taken between 1901 and 1908. However, the credit for most of these pictures must be shared with, if not given entirely to, Herman Bohlman, who worked with Finley in the period. It is clear that, at the beginning of their joint efforts, Bohlman was the photographer and an artist in his own right. By 1908, Bohlman's career as a photographer was essentially at an end, and Finley's was changing from that of a recorder of nature to that of a producer of "cute" photographs and movies. The role that Irene Finley, who married William Finley in 1906 and quickly became his partner in his subsequent work, played in the parting of Finley and Bohlman is not addressed. There appears to have been a dark side to Finley's personality that made it difficult for him to work with those who did not completely agree with him. His career with the Oregon Fish and Game Commission was stormy and included many shifts in assignment; at one point, he was fired for "incompatibility." Although he trained to be a scientist, he never published a scientific study. I found it hard to tell from this book whether Finley was a truly gifted individual who wasted much of his life in trivial pursuits or was just lucky in catching the public eye and riding a wave of public interest in nature. The author interviewed Finley's and Bohlman's children and others who knew one or both men and had access to their papers. I hope that he will write the more illuminating book they both deserve.

The "treasure" part of the book is the more than 200 photographs. Even though many of the original plates of birds were lost, as was the early and most valuable movie footage, those published here are a joy. About half of them are from the period when Finley and Bohlman worked together. Many examples of their portraits of birds are presented, but to me the most interesting pictures are those that show the photographers in the field. Finley and Bohlman had a keen sense of humor and took many pictures showing themselves in humorous or awkward situations. Many other pictures illustrate the hardships and risks they faced in the field and can elicit only admiration from those of us who have suffered comparatively minor irritations with modern equipment.

Overall, this book is a valuable contribution to the history of nature photography and the conservation efforts in the early part of this century. Many will want to read and own this reminder of how different things were just a few short years ago. Recommend it to your local librarian.

J. G. Strauch, Jr.

NEW PUBLICATIONS

*Barnard, C. J., and Thompson, D. B. A. 1985. *Gulls and Plovers: The Ecology and Behaviour of Mixed-Species Feeding Groups*. Columbia University Press, New York. xii + 302 pp.

Blake, B. F., M. L. Tasker, P. Hope Jones, T. J. Dixon, R. Mitchell, and D. R. Lanslow. 1984. Seabird distribution in the North Sea. Huntingdon, Nature Conservancy.

Brown, R. G. B. 1986. Revised Atlas of Canadian Seabirds I: Shipboard Surveys. Canadian Wildlife Service, Ottawa. (Bedford Institute of Oceanography, Dartmouth, Nova Scotia)

*Croxall, J. P., ed. 1987. *Seabirds: feeding ecology and role in marine ecosystems*. Cambridge University Press, New York. vii + 408 pp.

*MEDMARVIS, and X. Monbailliu. 1986. *Mediterranean Marine Avifauna*. Springer-Verlag, New York. xx + 535 pp. ($136.00 hardcover).

Muller-Schwarz, D. 1984. The Behavior of Penguins adapted to ice and tropics. Albany State University of New York Press. 193 pp. ($29.50 hardcover; $10.95 softcover)

*Nelson, B. 1986. *Living with Seabirds*. Edinburgh University Press, Edinburgh; distributed by Columbia University Press, New York. viii + 253 pp. ($25.00 hardcover)

Pitman, B. L. 1986. Atlas of seabird distribution and relative abundance in the eastern tropical Pacific. National Marine Fisheries Service, Southwest Fisheries Centre, Administrative Report LJ-86-02C. (P. O. Box 271, La Jolla, California 92038)

*To be reviewed in a future issue of the Bulletin

BULLETIN BOARD

Mediterranean Seabird Group formed

In late March 1986, 50 seabird biologists met in the Sardinian town of Algehro for the first Mediterranean Seabird Symposium. The NATO-sponsored meeting covered topics such as national marine surveys, population trends, man-made and natural impacts on seabird populations, and conservation issues. The meeting ended on a high note: the formation of MEDMARVIS, the Mediterranean Seabird Group. The proceedings of the meeting have been published by Springer-Verlag (see New Publications) and will be reviewed in a future issue of the Bulletin. The next Mediterranean Seabird Symposium is scheduled for fall of 1989 in Mallorca.

Seabirds of Sri Lanka

Seabird Watch (Sri Lanka) is preparing a preliminary checklist of the seabirds of Sri Lanka. This will be published in the July 1987 issue of their bulletin. Those interested should contact Mr. Rex I. De Silva, Seabird Watch, Hepporawatte, Dampe, Madspatha, Sri Lanka.

Interwader

INTERWADER, the East Asian/Pacific Shorebird Study Program has recently joined the IPT Asian Wetland Bureau. This is an independent international organization, which aims to promote protection and sustainable utilization of wetland resources in Asia, in conjunction with both governmental and nongovernmental agencies. The INTERWADER Newsletter will be replaced by the Asian Wetland News, which will give considerable emphasis to waterbirds.

French Seabird Group

Until recently, French ornithologists with interests in seabirds met in an informal working group known as the "Groupe de Travail sur les Oiseaux Marins." In September 1986, they formed an official seabird group: "the Groupement d'Interet Scientifique Oiseaux Marins." The chairman is Georges Hemery, of the Museum National d'Histoire Naturelle. This group aims to develop contacts and exchanges between both amateur and professional seabird enthusiasts and to promote and conduct study on seabirds and their environment. Its geographic area of intervention is France and its overseas territories, including the French Austral and Antarctic Territories. This may be extended to other countries.

Request for information on Flamingos

Alberto Estrada is studying Flamingos in Cuba and would like to correspond with other researchers. As there is little literature in Cuba, he would particularly appreciate bibliographies or articles. His address is: Alberto R. Estrada, Apartado 5152, La Habana 5, Cuba.

Hawaiian pamphlet available

The State of Hawaii, Department of Land and Natural Resources, has available publications to advise architects, planners, resort managers, and citizens on the control of lighting, which may be an attractant to seabirds. T. Telfer, DLNR, Kauai.

Endangered Species UPDATE

The Endangered species UPDATE is a monthly bulletin published by the School of Natural Resources at the University of Michigan. The UPDATE includes a reprint of the latest Endangered Species Technical Bulletin (published by the U.S. Fish and Wildlife Service) along with complementary articles and information about species conservation efforts outside the federal program.

The bulletin was originally developed to reprint the USFWS Endangered Species Technical Bulletin. Due to budget cuts in 1981, the USFWS was forced to limit distribution of their publication to federal and state agencies and official contacts of the Endangered Species Program. In 1983, the School of Natural Resources recognized the bulletin as a unique source of information on the Federal Endangered Species Program and initiated a reprint program making the bulletin available to the public for an annual subscription fee of $15.

The Endangered Species Technical Bulletin Reprint has recently changed its name to the Endangered Species UPDATE and increased the amount of information supplementing the USFWS bulletin. Upcoming article topics include a 15-year retrospective on the Endangered Species Act, the private land trust movement and its contribution to species conservation, and global climate change and its effect on habitats.

If you are interested in receiving the UPDATE (12 monthly issues), send $15 by check or money order (payable to The University of Michigan) to: The Endangered Species UPDATE, School of Natural Resources, The University of Michigan, Ann Arbor, MI 48109-1115.